

## PATENT COOPERATION TREATY

PCT

## NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner  
 US Department of Commerce  
 United States Patent and Trademark  
 Office, PCT  
 2011 South Clark Place Room  
 CP2/5C24  
 Arlington, VA 22202  
 ETATS-UNIS D'AMERIQUE  
 in its capacity as elected Office

Date of mailing (day/month/year) 20 February 2001 (20.02.01)	
International application No. PCT/US00/12796	Applicant's or agent's file reference 20631-11PC
International filing date (day/month/year) 09 May 2000 (09.05.00)	Priority date (day/month/year) 11 May 1999 (11.05.99)
Applicant MILLS, Kevin, J. et al	

1. The designated Office is hereby notified of its election made:



in the demand filed with the International Preliminary Examining Authority on:

11 December 2000 (11.12.00)



in a notice effecting later election filed with the International Bureau on:

2. The election



was



was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer Antonia Muller
Facsimile No.: (41-22) 740.14.35	Telephone No.: (41-22) 338.83.38

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REC'D 29 JAN 2002

## PCT

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## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

10/009452

Applicant's or agent's file reference 20631-11PC	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/US00/12796	International filing date (day/month/year) 09 MAY 2000	Priority date (day/month/year) 11 MAY 1999
International Patent Classification (IPC) or national classification and IPC IPC(7): G06F 3/00, 13/00; H05K 5/00, 7/00 and US Cl.: 710/ 2, 102; 361/684, 686		
Applicant SOCKET COMMUNICATIONS, INC.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

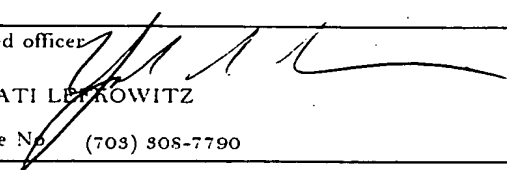
2. This REPORT consists of a total of 6 sheets.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority. (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 0 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of report with regard to novelty, inventive step or industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand  11 DECEMBER 2000	Date of completion of this report  17 JANUARY 2002
Name and mailing address of the IPEA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231	Authorized officer  SUMATI L. KOWITZ
Facsimile No. (703) 305-3230	Telephone No. (703) 305-7790

**I. Basis of the report**1. With regard to the **elements** of the international application:\*

the international application as originally filed



the description:

pages 1-23 , as originally filed  
pages NONE , filed with the demand  
pages NONE , filed with the letter of \_\_\_\_\_



the claims:

pages 24-34 , as originally filed  
pages NONE , as amended (together with any statement) under Article 19  
pages NONE , filed with the demand  
pages NONE , filed with the letter of \_\_\_\_\_



the drawings:

pages 1-24 , as originally filed  
pages NONE , filed with the demand  
pages NONE , filed with the letter of \_\_\_\_\_



the sequence listing part of the description:

pages NONE , as originally filed  
pages NONE , filed with the demand  
pages NONE , filed with the letter of \_\_\_\_\_

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:



the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).



the language of publication of the international application (under Rule 48.3(b)).



the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

contained in the international application in printed form.



filed together with the international application in computer readable form.



furnished subsequently to this Authority in written form.



furnished subsequently to this Authority in computer readable form.



The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.



The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☒ The amendments have resulted in the cancellation of:the description, pages NONEthe claims, Nos. NONEthe drawings, sheets/fig NONE5. ☐ This report has been drawn as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

\*\*Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US00/12796

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. statement**

Novelty (N)	Claims	<u>NONE</u>	YES
	Claims	<u>1-62</u>	NO
Inventive Step (IS)	Claims	<u>NONE</u>	YES
	Claims	<u>1-62</u>	NO
Industrial Applicability (IA)	Claims	<u>1-62</u>	YES
	Claims	<u>NONE</u>	NO

**2. citations and explanations (Rule 70.7)**

Claims 1, 28-30, 39, 40, and 56-58 lack novelty under PCT Article 33(2) as being anticipated by Kaneda et al., 5,184,282 (hereinafter Kaneda).

a. As to claims 1, 28, 30, and 40, Kaneda discloses a removable expansion card (note Figure 9) for a portable host, comprising an expansion card frame and PCB, a host-interconnect for coupling with the host, an I/O interconnect for coupling with the external I/O device (note Figure 9, element 27), I/O adapter circuitry for the I/O device (inherent in the serial to parallel conversion required to interface a telephone device with a computer), a slot for a removable memory (note Figure 9, elements 16 and 17 and column 5, lines 35-40), and removable memory adapter circuitry for the removable memory (inherent in the fact that the removable memory and host computer communicate) (note abstract, column 1, lines 12-25, and column 2, line 45 - column 3, line 4).

b. As to claim 29, Kaneda discloses that the removable memory is a private memory for application-specific circuitry and that the management of the removable memory is an ancillary function to the primary function of the specific application (note column 1, lines 12-34).

c. As to claims 39, 56, 57, and 58, Kaneda discloses a slot assembly for a removable expansion memory comprising a PCB, an I/O connector mounted on the PCB providing a first partial bottom of slot, a guide/connector assembly mounted on PCB having connector fingers and providing a second partial bottom of the slot, rear sides of the slot, and slot back stop, upper outside frame of expansion module frame providing front sides of slot and the lid of the expansion module providing the top of the slot (note Figures 6 and 9).

Claims 2, 3, 5, 7, 9-17, 41, 42 lack an inventive step under PCT Article 33(3) as being obvious over Kaneda et al., 5,184,282 (hereinafter Kaneda).

a. As to claim 2, Kaneda fails to disclose that the card is a CompactFlash card.

Examiner takes Official Notice that CompactFlash cards are well known in the art of removable expansion cards. (Continued on Supplemental Sheet.)

**Supplemental Box**

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: Boxes I - VIII

Sheet 10

**V. 2. REASONED STATEMENTS - CITATIONS AND EXPLANATIONS (Continued):**

It would have been obvious to one of ordinary skill in the art at the time of the invention to employ the use of a CompactFlash in the system of Kaneda so as to allow the system to be compatible with a widely used standard and to allow the system to take advantage of the many benefits provided by a CompactFlash card.

b. As to claim 3, Kaneda fails to disclose that the removable memory slot is compatible with a MMC, and the removable memory adapter circuitry is MMC adapter circuitry.

Examiner takes Official Notice that MMC is well known in the art of removable expansion cards.

It would have been obvious to one of ordinary skill in the art at the time of the invention to employ the use of MMC components and circuitry in the system of Kaneda so as to allow the system to be compatible with a widely used standard and to allow the system to take advantage of the many benefits provided by MMC.

c. As to claim 5, Kaneda fails to disclose that the I/O adapter circuitry is a LAN adapter and the I/O interconnect includes a cable having a standard LAN connector.

Examiner takes Official Notice that LAN cards, LAN cables and LAN connectors are well known in the art of networks.

It would have been obvious to one of ordinary skill in the art at the time of the invention to employ the use of a LAN card, LAN cable and LAN connector in the system of Kaneda so as to allow the system of Kaneda to function in a network environment.

d. As to claim 7, Kaneda fails to disclose that the I/O interconnect is a Honda-style 15-pin connector integral to the card.

Examiner takes Official Notice that Honda-style 15-pin connectors are well known in the art of expansion cards.

It would have been obvious to one of ordinary skill in the art at the time of the invention to employ the use of Honda-style 15-pin connectors in the system of Kaneda so as to be compatible with a widely used connector and take advantage of the benefits provided by Honda-style 15-pin connectors.

e. As to claims 9-17, Kaneda discloses some of the claim limitations, as discussed above with respect to claims 1-8, but fails to disclose the environmental limitations of video and audio digitally encoded data.

Examiner takes Official Notice that the processing of video and audio data in the manner recited in the claim limitations is well known in the art of multimedia processing.

It would have been obvious to one of ordinary skill in the art at the time of the invention to employ the use of any kind of digitally encoded data, including digitally encoded video and audio data, as the data stored in the removable memory since the type of data stored and processed would not change the overall configuration of an expansion card with a slot for a removable memory and a connector for an I/O device.

f. As to claim 41, the claimed elements have already been discussed above with respect to claim 1 above, with the exception of a second-level I/O interface for coupling with a second external I/O device, and second-level I/O adapter circuitry for the second I/O device.

Having a second-level I/O interface for coupling with a second external I/O device, and second-level I/O adapter circuitry for the second I/O device is simply a duplication of the first I/O interface, external I/O device and I/O adapter. And according to *In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960), mere duplication of parts has no patentable significance unless a new and unexpected result is produced, so that it would have been obvious to one of ordinary skill in the art at the time of the invention to have a second-level I/O interface for coupling with a second external I/O device, and second-level I/O adapter circuitry for the second I/O device.

g. As to claim 42, Kaneda discloses that the first external I/O device is a phone (note column 4, lines 60-62).

Claims 4 and 6 lack an inventive step under PCT Article 33(3) as being obvious over Kaneda et al., 5,184,282 (hereinafter Kaneda) in view of Corder, 5,615,344.

a. As to claim 4, Kaneda fails to disclose that the I/O adapter circuitry is a serial I/O adapter and the I/O interconnect includes a cable having a standard serial connector.

Corder discloses a card with a serial I/O adapter and an I/O interconnect that includes a cable having a serial connector (note Figures 1 and 3).

It would have been obvious to one of ordinary skill in the art at the time of the invention to employ the use of a serial I/O adapter and serial connector so as to interface with the wide variety of serial I/O devices available in the art.

b. As to claim 6, Kaneda fails to disclose that the I/O adapter circuitry is a parallel adapter and the I/O interconnect includes a cable having a standard parallel connector.

Corder discloses a card with a parallel I/O adapter and an I/O interconnect that includes a cable having a parallel connector (note Figure 1).

It would have been obvious to one of ordinary skill in the art at the time of the invention to employ the use of a serial I/O adapter and serial connector so as to interface with the wide variety of parallel I/O devices available in the art.

Claims 8 and 43-48 lack an inventive step under PCT Article 33(3) as being obvious over Kaneda et al., 5,184,282

**Supplemental Box**

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: Boxes I - VIII

Sheet 11

(hereinafter Kaneda) in view of Krishan et al., 5,611,055 (hereinafter Krishan).

a. As to claim 8, Kaneda fails to disclose that the card is designed to abut and fasten with at least part of the I/O device such that the I/O interconnect for coupling with the I/O device is cableless.

Krishan discloses that a card is designed to abut and fasten with at least part of the I/O device such that the I/O interconnect for coupling with the I/O device is cableless.

It would have been obvious to one of ordinary skill in the art at the time of the invention to employ the use of a card that is designed to abut and fasten with at least part of the I/O device such that the I/O interconnect for coupling with the I/O device is cableless in the system of Kaneda, as Krishan teaches, so as to avoid problems associated with cables, such as tangling with other cables and cluttering and not having cables of sufficient length.

b. As to claim 43, Kaneda fails to disclose that the second-level I/O adapter circuitry includes wireless interface circuitry, the second-level I/O interface includes a wireless transducer, and the second-level I/O device includes wireless network interface circuitry, and the coupling to the second external I/O device is wireless, but does disclose that the connector 27 allows communication devices such as networks to be coupled to card.

Krishan discloses that the I/O interconnect for coupling with the I/O device is cableless.

It would have been obvious to one of ordinary skill in the art at the time of the invention to couple a wireless network, with its associated transducer, to the card to allow a network to be coupled to the system without dealing with problems associated with cables, such as tangling with other cables and cluttering and not having cables of sufficient length.

c. As to claim 44, Kaneda fails to disclose that the first wireless network interface circuitry is RF wireless network interface circuitry and the wireless transducer includes an antenna.

Examiner takes Official Notice that RF wireless network interface circuitry and antennas are well known in the art of wireless communications.

It would have been obvious to one of ordinary skill in the art at the time of the invention to employ the use of RF wireless network interface circuitry and antennas in the system of Kaneda, since RF wireless network interface circuitry and antennas are reliable and cost-effective means for carrying out communication over a wireless network.

d. As to claim 45, Kaneda fails to disclose that the RF wireless network interface circuitry is compatible with the Bluetooth wireless network standard.

The Bluetooth wireless network standard is a well known standard in the art of wireless communications.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have the RF wireless network interface circuitry be compatible with the Bluetooth wireless network standard so as to allow the RF wireless network interface circuitry to be in conformance with Bluetooth, which is among the latest developments in wireless communications, thereby allowing the system of Kaneda to be implemented in the many systems which use the Bluetooth standard.

Claims 18-27 and 31-38 lack an inventive step under PCT Article 33(3) as being obvious over Kaneda et al., 5,184,282 (hereinafter Kaneda) in view of Jones, 5,928,347.

a. As to claims 18-22, Kaneda discloses some of the claim limitations, as discussed above with respect to claims 1-8, but fails to disclose the limitations regarding the transferring of digitally encoded media from an external system to a PDA to the expansion card to the removable memory and later reading, decoding, and playing back the digitally encoded media.

Jones discloses transferring digitally encoded media from an external system to a PDA to the expansion card to the removable memory and later reading, decoding, and playing back the digitally encoded media (note abstract and column 1, lines 40-50, column 2, line 39 - column 3, line 2, and column 3, line 30 - column 4, line 8).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the removable memory card to store digitally encoded media for later playback in the system of Kaneda, as Jones teaches, so as to allow the memory card to be used with consumer devices, as Jones teaches in column 3, lines 40-50 and column 4, lines 40-50.

b. As to claims 23-27, Kaneda discloses substantially all the limitations, as discussed above with respect to claims 1-8, with the exception of the data in the removable memory being address book records, telephone communications, and map information.

Jones teaches that the removable memory can store various kinds of data such as address book data and voice and pager messages (note column 2, lines 39-47).

It would have been obvious to one of ordinary skill in the art at the time of the invention to allow any kind of data, including address book data and voice and pager messages, in the memory of Kaneda, as Jones teaches, so as to allow the memory card to be used with a wide variety of applications and consumer products, as Jones teaches in column 2, lines 39-47.

c. As to claims 31-34 and 36, the claimed limitations have already been discussed above with respect to claims 18-22.

d. As to claims 35 and 37, Kaneda fails to disclose that the PDA and card transition from a first power mode to a second power mode in response to a message received over the network.

Examiner takes Official Notice that transitioning from one power mode to another in response to a message or command is well known in the art of power management.

**Supplemental Box**

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: Boxes I - VIII

Sheet 12

It would have been obvious to one of ordinary skill in the art at the time of the invention to transition from one power mode to another in response to a message or command in the system of Kaneda so as to manage power consumption in the system.

e. As to claim 38, the claimed limitations have already been discussed with respect to claim 8 above.

Claims 48-55 and 59-62 meet the criteria set out in PCT Article 33(2)-(4), because the prior art does not teach or fairly suggest transferring information between the first and second networks via the first-level and second-level removable expansion modules, where the first-level module is coupled to a portable host via a first-level slot and the second-level module is coupled to the first-level module via a second-level slot, or transferring information between a first-level module and a second-level module, where the first-level module is coupled to a portable host via a first-level slot and the second-level module is coupled to the first-level module via a second-level slot.

----- NEW CITATIONS -----

NONE

*FOR THE PURPOSES OF INFORMATION ONLY*

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AL	Albania	ES	Spain	LS	Lesotho	SI	Slovenia
AM	Armenia	FI	Finland	LT	Lithuania	SK	Slovakia
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DE	Germany	LK	Sri Lanka	SE	Sweden		
DK	Denmark	LR	Liberia	SG	Singapore		
EE	Estonia						



## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US00/12796

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC(7) : G06F 3/00, 13/00; H05K 5/00, 7/00

US CL : 710/ 2, 102; 361/684, 686

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 710/1-2, 100-102; 361/679-686

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

STN, WEST 2.0

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 5,184,282 A (KANEDA et al) 02 February 1993, col. 1, lines 21-25 and col. 2, line 45 - col. 3, line 4.	1-3, 5, 7, 9-17, 28-30, 40, 41, 49, 59, 60 ----- 4, 6, 8, 18-27, 31-38, 42-48, 50-55, 61, 62
X,P	US 6,053,748 A (BRICAUD et al) 25 April 2000, abstract and Figure 1.	39, 56-58
Y, P	US 5,928,347 A (JONES) 27 July 1999, col. 1, lines 40-50, col. 2, line 39 - col. 3, line 2, and col. 3, line 30 - col. 4, line 8.	18-27, 31-38, 42- 48, 50-55, 61, 62

☒ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:	*T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
*A* document defining the general state of the art which is not considered to be of particular relevance	*X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
*E* earlier document published on or after the international filing date	*Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
*L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	*G* document member of the same patent family
*O* document referring to an oral disclosure, use, exhibition or other means	
*P* document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

08 SEPTEMBER 2000

Date of mailing of the international search report

03 OCT 2000

Name and mailing address of the ISA/US  
Commissioner of Patents and Trademarks  
Box PCT  
Washington, D.C. 20231

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Authorized officer

SUMATI LEFKOWITZ

Telephone No. (703) 802-5900

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US00/12796

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5,615,344 A (CORDER) 25 March 1997, Figures 1 and 3.	4, 6
Y	US 5,611,055 A (KRISHAN et al) 11 March 1997, Figure 2.	8

DNS

## PATENT COOPERATION TREATY

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To: PAUL C. HAUGHEY  
TOWNSEND AND TOWNSEND AND CREW LLP  
TWO EMBARCADERO CENTER  
8TH FLOOR  
SAN FRANCISCO, CA 94111-3834

PCT

WRITTEN OPINION

(PCT Rule 66)

Date of Mailing  
(day/month/year)

30 APR 2001

Applicant's or agent's file reference

20631-11PC

REPLY DUE

01/30/01

within TWO months  
from the above date of mailing

International application No.

PCT/US00/12796 ✓

International filing date (day/month/year)

09 MAY 2000 ✓

Priority date (day/month/year)

11 MAY 1999 ✓

International Patent Classification (IPC) or both national classification and IPC

IPC(7): G06F 3/00, 13/00; H05K 5/00, 7/00 and US Cl.: 710/ 2, 102; 361/684, 686

Applicant

SOCKET COMMUNICATIONS, INC. ✓

1. This written opinion is the first (first, etc.) drawn by this International Preliminary Examining Authority.

2. This opinion contains indications relating to the following items:

- I ☒ Basis of the opinion
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step or industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

3. The applicant is hereby invited to reply to this opinion.

When? See the time limit indicated above. ~~The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(d).~~

How? By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

Also For an additional opportunity to submit amendments, see Rule 66.4.  
For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4 *bis*.  
For an informal communication with the examiner, see Rule 66.6.

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.

4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: 11 SEPTEMBER 2001

Name and mailing address of the IPEA/US  
Commissioner of Patents and Trademarks  
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Authorized officer

SUMATI LEFKOWITZ

Telephone No. (703) 308-7790

Response 01/30/01  
DOCKETED

**I. Basis of the opinion**

**1. With regard to the elements of the international application: \***

☒ the international application as originally filed

☒ the description:

pages 1-23, as originally filed  
 pages NONE, filed with the demand  
 pages NONE, filed with the letter of \_\_\_\_\_

☒ the claims:

pages 24-34, as originally filed  
 pages NONE, as amended (together with any statement) under Article 19  
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 pages NONE, filed with the letter of \_\_\_\_\_

☒ the drawings:

pages 1-24, as originally filed  
 pages NONE, filed with the demand  
 pages NONE, filed with the letter of \_\_\_\_\_

☒ the sequence listing part of the description:

pages NONE, as originally filed  
 pages NONE, filed with the demand  
 pages NONE, filed with the letter of \_\_\_\_\_

**2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.**  
 These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).

☐ the language of publication of the international application (under Rule 48.3(b)).

☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

**3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the written opinion was drawn on the basis of the sequence listing:**

☐ contained in the international application in printed form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

**4. ☒ The amendments have resulted in the cancellation of:**

☒ the description, pages NONE

☒ the claims, Nos. NONE

☒ the drawings, sheets/fig NONE

**5. ☐ This opinion has been drawn as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed".

**V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. statement**

Novelty (N)	Claims	<u>NONE</u>	YES
	Claims	<u>1-62</u>	NO
Inventive Step (IS)	Claims	<u>NONE</u>	YES
	Claims	<u>1-62</u>	NO
Industrial Applicability (IA)	Claims	<u>1-62</u>	YES
	Claims	<u>NONE</u>	NO

**2. citations and explanations**

Claims 1, 28-30, 39, 40, and 56-58 lack novelty under PCT Article 33(2) as being anticipated by Kaneda et al., 5,184,282 (hereinafter Kaneda).

a. As to claims 1, 28, 30, and 40, Kaneda discloses a removable expansion card (note Figure 9) for a portable host, comprising an expansion card frame and PCB, a host-interconnect for coupling with the host, an I/O interconnect for coupling with the external I/O device (note Figure 9, element 27), I/O adapter circuitry for the I/O device (inherent in the serial to parallel conversion required to interface a telephone device with a computer), a slot for a removable memory (note Figure 9, elements 16 and 17 and column 5, lines 35-40), and removable memory adapter circuitry for the removable memory (inherent in the fact that the removable memory and host computer communicate) (note abstract, column 1, lines 12-25, and column 2, line 45 - column 3, line 4).

b. As to claim 29, Kaneda discloses that the removable memory is a private memory for application-specific circuitry and that the management of the removable memory is an ancillary function to the primary function of the specific application (note column 1, lines 12-34).

c. As to claims 39, 56, 57, and 58, Kaneda discloses a slot assembly for a removable expansion memory comprising a PCB, an I/O connector mounted on the PCB providing a first partial bottom of slot, a guide/connector assembly mounted on PCB having connector fingers and providing a second partial bottom of the slot, rear sides of the slot, and slot back stop, upper outside frame of expansion module frame providing front sides of slot and the lid of the expansion module providing the top of the slot (note Figures 6 and 9).

Claims 2, 3, 5, 7, 9-17, 41, 42 lack an inventive step under PCT Article 33(3) as being obvious over Kaneda et al., 5,184,282 (hereinafter Kaneda).

a. As to claim 2, Kaneda fails to disclose that the card is a CompactFlash card.

Examiner takes Official Notice that CompactFlash cards are well known in the art of removable expansion cards.

(Continued on Supplemental Sheet.)

**Supplemental Box**

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: Boxes I - VIII

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**TIME LIMIT:**

The time limit set for response to a Written Opinion may not be extended. 37 CFR 1.484(d). Any response received after the expiration of the time limit set in the Written Opinion will not be considered in preparing the International Preliminary Examination Report.

**V. 2. REASONED STATEMENTS - CITATIONS AND EXPLANATIONS (Continued):**

It would have been obvious to one of ordinary skill in the art at the time of the invention to employ the use of a CompactFlash in the system of Kaneda so as to allow the system to be compatible with a widely used standard and to allow the system to take advantage of the many benefits provided by a CompactFlash card.

b. As to claim 3, Kaneda fails to disclose that the removable memory slot is compatible with a MMC, and the removable memory adapter circuitry is MMC adapter circuitry.

Examiner takes Official Notice that MMC is well known in the art of removable expansion cards.

It would have been obvious to one of ordinary skill in the art at the time of the invention to employ the use of MMC components and circuitry in the system of Kaneda so as to allow the system to be compatible with a widely used standard and to allow the system to take advantage of the many benefits provided by MMC.

c. As to claim 5, Kaneda fails to disclose that the I/O adapter circuitry is a LAN adapter and the I/O interconnect includes a cable having a standard LAN connector.

Examiner takes Official Notice that LAN cards, LAN cables and LAN connectors are well known in the art of networks.

It would have been obvious to one of ordinary skill in the art at the time of the invention to employ the use of a LAN card, LAN cable and LAN connector in the system of Kaneda so as to allow the system of Kaneda to function in a network environment.

d. As to claim 7, Kaneda fails to disclose that the I/O interconnect is a Honda-style 15-pin connector integral to the card.

Examiner takes Official Notice that Honda-style 15-pin connectors are well known in the art of expansion cards.

It would have been obvious to one of ordinary skill in the art at the time of the invention to employ the use of Honda-style 15-pin connectors in the system of Kaneda so as to be compatible with a widely used connector and take advantage of the benefits provided by Honda-style 15-pin connectors.

e. As to claims 9-17, Kaneda discloses some of the claim limitations, as discussed above with respect to claims 1-8, but fails to disclose the environmental limitations of video and audio digitally encoded data.

Examiner takes Official Notice that the processing of video and audio data in the manner recited in the claim limitations is well known in the art of multimedia processing.

It would have been obvious to one of ordinary skill in the art at the time of the invention to employ the use of any kind of digitally encoded data, including digitally encoded video and audio data, as the data stored in the removable memory since the type of data stored and processed would not change the overall configuration of an expansion card with a slot for a removable memory and a connector for an I/O device.

f. As to claim 41, the claimed elements have already been discussed above with respect to claim 1 above, with the exception of a second-level I/O interface for coupling with a second external I/O device, and second-level I/O adapter circuitry for the second I/O device.

Having a second-level I/O interface for coupling with a second external I/O device, and second-level I/O adapter circuitry for the second I/O device is simply a duplication of the first I/O interface, external I/O device and I/O adapter. And according to *In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960), mere duplication of parts has no patentable significance unless a new and unexpected result is produced, so that it would have been obvious to one of ordinary skill in the art at the time of the invention to have a second-level I/O interface for coupling with a second external I/O device, and second-level I/O adapter circuitry for the second I/O device.

g. As to claim 42, Kaneda discloses that the first external I/O device is a phone (note column 4, lines 60-62).

Claims 4 and 6 lack an inventive step under PCT Article 33(3) as being obvious over Kaneda et al., 5,184,282 (hereinafter Kaneda) in view of Corder, 5,615,344.

a. As to claim 4, Kaneda fails to disclose that the I/O adapter circuitry is a serial I/O adapter and the I/O interconnect includes a cable having a standard serial connector.

Corder discloses a card with a serial I/O adapter and an I/O interconnect that includes a cable having a serial connector (note Figures 1 and 3).

It would have been obvious to one of ordinary skill in the art at the time of the invention to employ the use of a serial I/O adapter and serial connector so as to interface with the wide variety of serial I/O devices available in the art.

b. As to claim 6, Kaneda fails to disclose that the I/O adapter circuitry is a parallel adapter and the I/O

**Supplemental Box**

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: Boxes I - VIII

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interconnect includes a cable having a standard parallel connector.

Corder discloses a card with a parallel I/O adapter and an I/O interconnect that includes a cable having a parallel connector (note Figure 1).

It would have been obvious to one of ordinary skill in the art at the time of the invention to employ the use of a serial I/O adapter and serial connector so as to interface with the wide variety of parallel I/O devices available in the art.

Claims 8 and 43-48 lack an inventive step under PCT Article 33(3) as being obvious over Kaneda et al., 5,184,282 (hereinafter Kaneda) in view of Krishan et al., 5,611,055 (hereinafter Krishan).

a. As to claim 8, Kaneda fails to disclose that the card is designed to abut and fasten with at least part of the I/O device such that the I/O interconnect for coupling with the I/O device is cableless.

Krishan discloses that a card is designed to abut and fasten with at least part of the I/O device such that the I/O interconnect for coupling with the I/O device is cableless.

It would have been obvious to one of ordinary skill in the art at the time of the invention to employ the use of a card that is designed to abut and fasten with at least part of the I/O device such that the I/O interconnect for coupling with the I/O device is cableless in the system of Kaneda, as Krishan teaches, so as to avoid problems associated with cables, such as tangling with other cables and cluttering and not having cables of sufficient length.

b. As to claim 43, Kaneda fails to disclose that the second-level I/O adapter circuitry includes wireless interface circuitry, the second-level I/O interface includes a wireless transducer, and the second-level I/O device includes wireless network interface circuitry, and the coupling to the second external I/O device is wireless, but does disclose that the connector 27 allows communication devices such as networks to be coupled to card.

Krishan discloses that the I/O interconnect for coupling with the I/O device is cableless.

It would have been obvious to one of ordinary skill in the art at the time of the invention to couple a wireless network, with its associated transducer, to the card to allow a network to be coupled to the system without dealing with problems associated with cables, such as tangling with other cables and cluttering and not having cables of sufficient length.

c. As to claim 44, Kaneda fails to disclose that the first wireless network interface circuitry is RF wireless network interface circuitry and the wireless transducer includes an antenna.

Examiner takes Official Notice that RF wireless network interface circuitry and antennas are well known in the art of wireless communications.

It would have been obvious to one of ordinary skill in the art at the time of the invention to employ the use of RF wireless network interface circuitry and antennas in the system of Kaneda, since RF wireless network interface circuitry and antennas are reliable and cost-effective means for carrying out communication over a wireless network.

d. As to claim 45, Kaneda fails to disclose that the RF wireless network interface circuitry is compatible with the Bluetooth wireless network standard.

The Bluetooth wireless network standard is a well known standard in the art of wireless communications.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have the RF wireless network interface circuitry be compatible with the Bluetooth wireless network standard so as to allow the RF wireless network interface circuitry to be in conformance with Bluetooth, which is among the latest developments in wireless communications, thereby allowing the system of Kaneda to be implemented in the many systems which use the Bluetooth standard.

Claims 18-27 and 31-38 lack an inventive step under PCT Article 33(3) as being obvious over Kaneda et al., 5,184,282 (hereinafter Kaneda) in view of Jones, 5,928,347.

a. As to claims 18-22, Kaneda discloses some of the claim limitations, as discussed above with respect to claims 1-8, but fails to disclose the limitations regarding the transferring of digitally encoded media from an external system to a PDA to the expansion card to the removable memory and later reading, decoding, and playing back the digitally encoded media.

Jones discloses transferring digitally encoded media from an external system to a PDA to the expansion card to the removable memory and later reading, decoding, and playing back the digitally encoded media (note abstract and column 1, lines 40-50, column 2, line 39 - column 3, line 2, and column 3, line 30 - column 4, line 8).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the removable memory card to store digitally encoded media for later playback in the system of Kaneda, as Jones teaches, so as to allow the memory card to be used with consumer devices, as Jones teaches in column 3, lines 40-50 and column 4, lines 40-50.

b. As to claims 23-27, Kaneda discloses substantially all the limitations, as discussed above with respect to claims 1-8, with the exception of the data in the removable memory being address book records, telephone communications, and map information.

Jones teaches that the removable memory can store various kinds of data such as address book data and voice and pager messages (note column 2, lines 39-47).

It would have been obvious to one of ordinary skill in the art at the time of the invention to allow any kind of data, including address book data and voice and pager messages, in the memory of Kaneda, as Jones teaches, so as to allow the

**Supplemental Box**

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: Boxes I - VIII

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memory card to be used with a wide variety of applications and consumer products, as Jones teaches in column 2, lines 39-47.

c. As to claims 31-34 and 36, the claimed limitations have already been discussed above with respect to claims 18-22.

d. As to claims 35 and 37, Kaneda fails to disclose that the PDA and card transition from a first power mode to a second power mode in response to a message received over the network.

Examiner takes Official Notice that transitioning from one power mode to another in response to a message or command is well known in the art of power management.

It would have been obvious to one of ordinary skill in the art at the time of the invention to transition from one power mode to another in response to a message or command in the system of Kaneda so as to manage power consumption in the system.

e. As to claim 38, the claimed limitations have already been discussed with respect to claim 8 above.

Claims 48-55 and 59-62 meet the criteria set out in PCT Article 33(2)-(4), because the prior art does not teach or fairly suggest transferring information between the first and second networks via the first-level and second-level removable expansion modules, where the first-level module is coupled to a portable host via a first-level slot and the second-level module is coupled to the first-level module via a second-level slot, or transferring information between a first-level module and a second-level module, where the first-level module is coupled to a portable host via a first-level slot and the second-level module is coupled to the first-level module via a second-level slot.

----- NEW CITATIONS -----  
NONE